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Congress of the United States

House of Representatives

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August 5, 1999

BY FACSIMILE

The Honorable Carol M. Browner
Administrator
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Administrator Browner:

I am writing to comment on the Environmental Protection Agency's (EPA) notice of proposed rulemaking for the Tier II/Sulfur rule issued on May 13, 1999 (64 FR 26004) and the clarification of the proposed rule published on June 30th (64 FR 35112). It is my opinion that the rule does not fulfill basic procedural requirements for a proposed rulemaking and that implementation of the rule, if finalized, may pose significant risks to public health. The problems are so serious that EPA should issue a second notice of the proposed rulemaking to remedy the shortcomings of the rule. Specifically, my comment raises the following concerns with the proposed Tier II/Sulfur rule and clarification notice:

Procedural problems

(1) EPA may not be in compliance with the requirements of Sec. 202(i)(2)(A) and Sec. 202 (i)(3)(A) of the Clean Air Act, which requires the Administrator to show that reductions in vehicle emissions are necessary in order to attain national ambient air quality standards (NAAQS).

(2) EPA's preliminary Regulatory Impact Analysis (RIA) is incomplete and does not provide the information necessary to allow timely and complete comments on the proposed rule.

(3) EPA did not adequately consider regulatory alternatives that allow for indefinite exemptions in areas negatively impacted by the rule.

(4) EPA did not provide access to key scientific data used in the benefit-cost analysis of the preliminary RIA.

(5) EPA may not be in compliance with Sec. 211(c)(2)(A) of the Clean Air Act, which requires consideration of the latest scientific evidence.

Substantive problems

(1) EPA did not adequately address the negative health impacts of the rule.

(2) EPA did not estimate how many areas will fall out of compliance with the NAAQS for ozone due to the negative environmental impacts of the rule.

(3) EPA's clarification of the proposed rule did not adequately address the implications of the recent U.S. Circuit Court of Appeals decision to remand new standards for ozone and fine particulate matter (PM/Ozone).

Procedural problems

(1) EPA may not be in compliance with the requirements of Sec. 202(i)(2)(A) and Sec. 202(i)(3)(A) of the Clean Air Act. Sec. 211(i)(2)(A) of the Clean Air Act states that EPA must determine whether reducing vehicle emissions is necessary in order to "attain or maintain" the NAAQS. However, in the case of nitrogen oxides (NOx), reducing emissions may not necessarily lower ozone levels. As the EPA acknowledges in the rule (64 FR 26017), it has long been known that reducing emissions of ozone precursors -- the constituents of smog -- can, paradoxically, lead to *higher* levels of the pollutant. However, EPA's air quality analysis of the rule, which is required under Sec. 202(i)(3)(A), shows that several urban areas will experience higher ozone levels in 2010. The study in question, which was commissioned from Abt Associates, and cited in Chapter VII of the RIA, plainly shows that reducing nitrogen dioxide (NOx) emissions will lead to higher levels of ozone smog.[1] Specifically, the analysis shows that seasonal ozone levels may increase by as much as 8.7 ppm in some urban areas. Exhibit A-21 of the analysis, however, which displays the projected increases in ozone levels in 2010, is not explained in the rule, the preliminary RIA, or the analysis itself. EPA should provide further clarification of this problem (referred to hereafter as NOx disbenefits) before the rule is finalized.

(2) EPA's preliminary Regulatory Impact Analysis (RIA) is incomplete and does not provide the information necessary to allow timely and complete comments on the proposed rule. According to the RIA's executive summary, "Our benefits-cost analysis should be considered preliminary due to limitations in the data and models available for analysis in advance of today's proposal." However, EPA did not adequately detail the data and modeling limitations of the proposed analysis. Without listing the specific limitations of the analysis, interested parties cannot accurately comment on the rule.

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[1] Abt Associates, "Tier II Proposed Rule: Air Quality Estimation, selected Health and Welfare Benefits Methods, and Benefit Analysis Results," April 1999, Exhibit A-21.

Past problems with preliminary and incomplete RIAs led to significantly understated cost estimates, such as the preliminary RIA for the proposed PM/Ozone NAAQS (62 FR 2). In the PM/Ozone preliminary RIA, EPA provided a "partial" annual cost estimate of the standards at $8.5 billion, which was ratcheted up to over $40 billion in the final RIA. Given that it is unclear whether the agency considered the potential negative health impacts of the Tier II/Sulfur proposal, there is reason to believe that the net benefits will decrease once EPA addresses this issue more thoroughly in its final RIA.

(3) EPA did not adequately consider regulatory alternatives that allow for indefinite exemptions in areas negatively impacted by the rule. EPA's explanation for implementing the Tier II standard via a national low-sulfur fuel standard is unconvincing (64 FR 26045-26050). The primary justification for implementing new national emission and fuel standards, as opposed to an alternative regional standard, is the cost associated with damage to vehicles equipped with new low-sulfur-fuel-dependent catalysts when operating with higher sulfur fuel.

The negative environmental impacts imposed on some areas by the rule's national approach may have significant costs. EPA, however, did not show that the costs associated with the so-called "irreversibility" problem outweigh the environmental benefits of an alternative regional approach that would consider permanent exemptions from the low-sulfur fuel requirement in areas with clean air as well as areas expected to see higher ozone levels under the rule.

EPA's reluctance to provide exemptions is surprising given that the Ozone Transport Assessment Group (OTAG) acknowledged the NOx disbenefits issue, and suggested that some areas should be given exemptions from NOx controls.[2] Citing the Implementation Strategies and Issues (ISI) subgroup, OTAG states in the final report that:

> Several ISI Workgroup participants believed that NOx reductions should not be required in areas where those reductions would result in NOx disbenefits; this would put those urban areas in the position of having to obtain greater VOC reductions to counteract the effect of the NOx reductions and would be inherently unfair to those areas.[3]

The ISI subgroup noted that localized NOx disbenefits apparently occur during critical ozone episodes in a few northern metropolitan areas. The group addressed the issue of refinement of local (State level) NOx control strategies to avoid NOx disbenefits,

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[2] Memorandum to Environmental Council of the States (ECOS) and OTAG Implementation Issues & Strategies Workgroup and the Criteria Evaluation Mini-workgroup from OTAG ISI Task Group: Criteria for Modeling & Strategy Refinement regarding NOx disbenefits, December 12, 1996, http://www.epa.gov/ttnotag1/otag/finalrpt/chp6/apph.htm.

[3] OTAG Final Report to EPA, Chapter 6, Sec. 5, December 12, 1996, http://www.epa.gov/ttnotag1/otag/finalrpt/chp6/apph.htm.

and recommended exemptions from local NOx controls where disbenefits could be demonstrated.

Despite concern by OTAG that NOx disbenefits were so large as to require exemptions from NOx controls, EPA did not consider permanent waivers or exemptions. EPA stated (64 FR 26017) that State and local governments will be left to implement counteracting controls to prevent increases in ozone levels from the rule. Yet, the cost and equity issues raised by such controls are not revealed.

(4) EPA did not provide access to key scientific data used in the benefit-cost analysis of the preliminary RIA. Chapter VII, concerning the benefit-cost analysis of the Tier II proposal, cites data that are not available to the public. In order for interested parties to accurately comment on the proposal, EPA must make all underlying data available to the public. Of particular concern are the data from an epidemiological study of fine particulate matter from Pope et al. (1995). The Pope et al. study was criticized by several parties, but is responsible for the majority of the benefits in the proposal. Despite being funded by Federal grants, EPA did not make these data available to the public. Without public access to such information, public comments cannot be fully informed.

(5) EPA may not be in compliance with Sec. 211(c)(2)(A) of the Clean Air Act, which requires consideration of the latest scientific evidence. EPA claims that it has considered the latest science as required under 211(c)(2)(A) of the Clean Air Act (64 FR 35118). However, EPA did not adequately address scientific analysis it commissioned by Abt Associates, as well as the latest science concerning NOx reduction strategies for reducing ozone. In particular, EPA made no mention of the so-called "weekday-weekend" effect studies. One study by the Environ Corporation suggests that reducing NOx from mobile sources may result in increasing smog in the Los Angeles basin.[4] The Environ study, which compared smog levels in Los Angeles during weekday and weekend periods, finds that smog levels tend to be higher on the weekend. A possible explanation for such an effect is that concentrated NOx emissions from automobiles somehow impede smog formation. Such a hypothesis would support the findings of EPA's Abt Associates study, as well as National Academy of Sciences (NAS) and OTAG research that reducing emissions of NOx is problematic. If the Environ study is correct, then the need for Tier II/Sulfur standards is even more questionable. EPA should consider such studies in its final proposal.

Substantive problems

(1) EPA did not adequately address the negative health impacts of the rule. The disbenefit section of Chapter VII of the preliminary RIA does not adequately describe the rule's negative impact on air quality, which undermines the credibility of estimated annual net benefits of $3.2 to $19.5 billion. EPA did not make clear whether these estimates include data from Exhibit A-19 of the Abt Associates study, which shows

[4] Till Stoeckenius, "Analysis of Weekend-Weekday Differences in Ozone and Ozone Precursors in the South Coast (Los Angeles) Air Basin, Environ Corporation, July 23, 1998.

ozone levels increasing in most urban areas under the rule in 2010. Table VII-16 of the RIA lists only aggregate benefits of 388 reduced deaths and 736 reduced hospital emissions from reduction in ozone, but gives no indication that negative health effects may occur. Given the magnitude of the potential increases in ozone for most urban areas as shown in the Abt Associates study (Exhibit A-21), the benefits of the rule, as estimated in the preliminary RIA, may be significantly overstated.

The problems with the preliminary RIA and the proposed rule stem mostly from the fact that EPA's did not adequately consider its own air quality analysis. The Abt Associates study shows that reducing NOx will paradoxically *increase* smog levels in several cities.[5] EPA's passing treatment of this potential problem is limited to the following paragraph from the proposed Tier II/Sulfur rule (64 FR 26017):

> There are uncertainties associated with the modeling we have used to estimate these reductions, but we are certain that the emission reductions would be large. Ozone levels in a few locations in the centers of large metropolitan areas are VOC-limited; that is, the atmospheric chemistry is such that ozone levels tend to respond to VOC reductions rather than to NOx reduction. **Some of the areas may experience essentially no change or a slight ozone increase on some days, if one considers only the isolated effect of the emission reductions due to today's proposal.** However, it has long been recognized that metropolitan areas containing such locations will need to implement additional VOC reductions from local sources to reach attainment. If these reductions and the reductions from today's proposal were combined, the net effect would be a progressive drop in ozone levels until attainment is reached (emphasis added).

Vaguely stating that smog levels will actually increase in some unidentified metropolitan areas, EPA does not estimate the potential negative environmental and economic consequences for each area at risk.

In addition, the clarification of the proposed rule also does not estimate the problems associated with reducing NOx emissions (64 FR 35112-35120). The clarification suggests only that 39 million people (64 FR 35114) will live in areas out of compliance with the ozone NAAQS in 2010 and may experience better air quality under the Tier II rule. The clarification does not appear to consider the increases in ozone smog projected to occur in 2010 by the Abt Associates analysis. There is also no discussion of the impact these increases in ozone may have on compliance with the one hour standard.

EPA's inadequate discussion of the negative health impacts of the Tier II/Sulfur proposal is surprising given the substantial discussion of the issue in OTAG's final report on regional NOx controls, the 1992 National Research Council (NRC) report on ozone pollution, and a significant peer-reviewed literature -- all of which suggest NOx reductions may lead to higher levels of ozone smog.

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5 "Tier II Proposed Rule: Air Quality Estimation, Selected Health and Welfare Benefits, and Benefit Analysis Results," April 1999. Air Docket A-97-10, document No. II-A-28, Exhibit A-19.

Without estimates of nationwide attainment status, one must be allowed to make reasonable assumptions about the population at risk if the Tier II/Sulfur proposal is implemented. In NRC's report, "Rethinking the Ozone Problem in Urban and Regional Air Pollution," several urban areas were shown to be at risk of higher ozone exposure under NOx reductions such as those called for in the Tier II/Sulfur proposal. Table I below suggests more than 83 million people could be at risk.

Table 1: Cities Where Tier II Standard May Increase Ozone Levels[6]
(1994 population by CMSA, rounded to nearest hundred thousand.)

New York	19,800,000
Kansas City MO	1,700,000
Atlanta	3,300,000
Boston	5,500,000
Charlotte	1,200,000
Los Angeles	15,300,000
Cincinnati	1,900,000
Cleveland	2,900,000
Dallas – Fort Worth	4,400,000
El Paso	700,000
Indianapolis	1,500,000
Chicago[7]	8,500,000
Washington DC	7,100,000
St. Louis	2,500,000
Philadelphia	6,000,000
Portland ME	100,000
Richmond	900,000
Total	**83,300,000**

Note: these cities may not be the only ones at risk of NOx disbenefits.

NAS believes the risk of higher ozone levels from NOx reductions is sufficiently serious that "specific situations must be carefully evaluated to determine the relative

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6 National Research Council, "Rethinking the Ozone Problem in Urban and Regional Air Pollution," National Academy Press, 1991, pp. 354-355.

7 The lower Lake Michigan Area was indicated as potentially vulnerable to higher levels of ozone under NOx reduction strategies in an analysis by former Clean Air Scientific Advisory Committee Chairman George Wolff. See "On A NOx-Focused Control Strategy to Reduce Ozone," George T. Wolff, Air & Waste, Vol. 43, December 1993, p. 1593.

electiveness of alternative abatement strategies." In other words, control strategies for individual cities would have to be developed on a case-by-case basis to preclude disbenefits. Such strategies were not adequately considered in EPA's proposal.

(2) EPA did not estimate how many areas will fall out of compliance with the NAAQS for ozone due to the negative environmental impacts of the rule. Given the concerns of NAS and OTAG about the risks of reducing NOx, EPA should -- but did not -- address the implications for compliance with the 1 hour ozone standard in 2010 (64 FR 35114-35117). EPA should have the capability of isolating the proposal's environmental benefits and disbenefits, and the impact on attainment status for all counties.

The absence of attainment information is problematic, given EPA's knowledge of the Abt Associates air quality study, which shows that increases in ozone will occur nationwide and not only in "a few" large metropolitan areas, as stated in the proposed rule (64 FR 26017). Exhibit A-19 of the Abt analysis shows that nearly every major city and several other large regions will experience higher mean ozone levels of up to 1.6 parts per billion under the proposal. If the Abt Associates analysis is correct, and seasonal increases in ozone smog could be as high as 8.7 ppb under the rule (exhibit A-21), it seems possible that some areas could be forced out of compliance with the 1 hour ozone standard.

(3) EPA's clarification of the proposed rule did not adequately address the implications of the recent U.S. Circuit Court of Appeals decision to remand new standards for PM/Ozone. EPA's insufficient consideration of the rule's negative impacts ignores the spirit of the recent U.S. Circuit Court of Appeals decision concerning the new air quality standards for ozone and fine particulate matter. The court found that EPA must consider disbenefits, or negative health effects, when revising or creating new air quality standards. Although the decision does not directly apply to the Tier II/Sulfur rule, referring only to the setting or revising of NAAQS under Sections 108 and 109 of the Clean Air Act, EPA should candidly divulge any potential negative health impacts of any regulatory action in the Tier II/Sulfur rule. The June 30th clarification notice, published in response to the recent court action, also makes no mention of the potential NOx disbenefits from the Tier II/Sulfur rule (64 FR 35112-35120). The clarification only states that the net benefits of the rule will be accrued by 83 million people living in 17 metropolitan areas (64 FR 35117).

Conclusion. The proposed rule to limit tailpipe emissions does not satisfy several procedural requirements. The procedural shortfalls are so serious that the EPA should issue a second notice of proposed rulemaking and RIA for the Tier II/Sulfur standards.

It is also apparent that the rule could impose significant risks on the American people. This issue is so serious that the Tier II/Sulfur rule should not be finalized without further *quantitative* analysis of the risk. Without such analysis, EPA may unwittingly put many Americans at risk of higher ozone exposure. Specifically, EPA should produce benefit-cost estimates that detail the negative health impacts of the Tier II/Sulfur rule, on

a city-by-city basis, using state of the art computer modeling and emissions inventories. If a significant population is found to be affected, EPA should immediately determine if current ozone levels in some areas are artificially high due to existing regulations that limit NOx emissions, including Tier I standards, and other regulations on mobile and stationary sources.

If you have any questions about these comments, please contact Professional Staff Member Joel Bucher at (202) 225-4407.

Sincerely,

David M. McIntosh
Chairman
Subcommittee on National Economic Growth,
Natural Resources and Regulatory Affairs

cc: The Honorable Dan Burton
The Honorable Dennis Kucinich